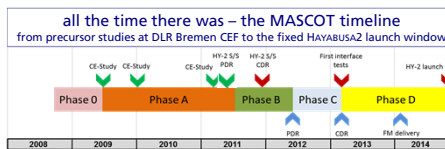


robert.hocke@dlr.de ¹DLR Institute of Space Systems, Robert-Hocke-Str. 8/350 Bremen, Germany ²jaundmann@dlr.de ³vlodymyr.baturkin@dlr.de ⁴robin.sindley@dlr.de
⁵christian.grimm@dlr.de ⁶trita-mo@dlr.de ⁷trita-mo@dlr.de ⁸trita-mo@dlr.de ⁹trita-mo@dlr.de ¹⁰trita-mo@dlr.de ¹¹trita-mo@dlr.de ¹²trita-mo@dlr.de ¹³trita-mo@dlr.de ¹⁴trita-mo@dlr.de ¹⁵trita-mo@dlr.de ¹⁶trita-mo@dlr.de ¹⁷trita-mo@dlr.de ¹⁸trita-mo@dlr.de ¹⁹trita-mo@dlr.de ²⁰trita-mo@dlr.de ²¹trita-mo@dlr.de ²²trita-mo@dlr.de ²³trita-mo@dlr.de ²⁴trita-mo@dlr.de ²⁵trita-mo@dlr.de ²⁶trita-mo@dlr.de ²⁷trita-mo@dlr.de ²⁸trita-mo@dlr.de ²⁹trita-mo@dlr.de ³⁰trita-mo@dlr.de ³¹trita-mo@dlr.de ³²trita-mo@dlr.de ³³trita-mo@dlr.de ³⁴trita-mo@dlr.de ³⁵trita-mo@dlr.de ³⁶trita-mo@dlr.de ³⁷trita-mo@dlr.de ³⁸trita-mo@dlr.de ³⁹trita-mo@dlr.de ⁴⁰trita-mo@dlr.de ⁴¹trita-mo@dlr.de ⁴²trita-mo@dlr.de ⁴³trita-mo@dlr.de ⁴⁴trita-mo@dlr.de ⁴⁵trita-mo@dlr.de ⁴⁶trita-mo@dlr.de ⁴⁷trita-mo@dlr.de ⁴⁸trita-mo@dlr.de ⁴⁹trita-mo@dlr.de ⁵⁰trita-mo@dlr.de ⁵¹trita-mo@dlr.de ⁵²trita-mo@dlr.de ⁵³trita-mo@dlr.de ⁵⁴trita-mo@dlr.de ⁵⁵trita-mo@dlr.de ⁵⁶trita-mo@dlr.de ⁵⁷trita-mo@dlr.de ⁵⁸trita-mo@dlr.de ⁵⁹trita-mo@dlr.de ⁶⁰trita-mo@dlr.de ⁶¹trita-mo@dlr.de ⁶²trita-mo@dlr.de ⁶³trita-mo@dlr.de ⁶⁴trita-mo@dlr.de ⁶⁵trita-mo@dlr.de ⁶⁶trita-mo@dlr.de ⁶⁷trita-mo@dlr.de ⁶⁸trita-mo@dlr.de ⁶⁹trita-mo@dlr.de ⁷⁰trita-mo@dlr.de ⁷¹trita-mo@dlr.de ⁷²trita-mo@dlr.de ⁷³trita-mo@dlr.de ⁷⁴trita-mo@dlr.de ⁷⁵trita-mo@dlr.de ⁷⁶trita-mo@dlr.de ⁷⁷trita-mo@dlr.de ⁷⁸trita-mo@dlr.de ⁷⁹trita-mo@dlr.de ⁸⁰trita-mo@dlr.de ⁸¹trita-mo@dlr.de ⁸²trita-mo@dlr.de ⁸³trita-mo@dlr.de ⁸⁴trita-mo@dlr.de ⁸⁵trita-mo@dlr.de ⁸⁶trita-mo@dlr.de ⁸⁷trita-mo@dlr.de ⁸⁸trita-mo@dlr.de ⁸⁹trita-mo@dlr.de ⁹⁰trita-mo@dlr.de ⁹¹trita-mo@dlr.de ⁹²trita-mo@dlr.de ⁹³trita-mo@dlr.de ⁹⁴trita-mo@dlr.de ⁹⁵trita-mo@dlr.de ⁹⁶trita-mo@dlr.de ⁹⁷trita-mo@dlr.de ⁹⁸trita-mo@dlr.de ⁹⁹trita-mo@dlr.de ¹⁰⁰trita-mo@dlr.de ¹⁰¹trita-mo@dlr.de ¹⁰²trita-mo@dlr.de ¹⁰³trita-mo@dlr.de ¹⁰⁴trita-mo@dlr.de ¹⁰⁵trita-mo@dlr.de ¹⁰⁶trita-mo@dlr.de ¹⁰⁷trita-mo@dlr.de ¹⁰⁸trita-mo@dlr.de ¹⁰⁹trita-mo@dlr.de ¹¹⁰trita-mo@dlr.de ¹¹¹trita-mo@dlr.de ¹¹²trita-mo@dlr.de ¹¹³trita-mo@dlr.de ¹¹⁴trita-mo@dlr.de ¹¹⁵trita-mo@dlr.de ¹¹⁶trita-mo@dlr.de ¹¹⁷trita-mo@dlr.de ¹¹⁸trita-mo@dlr.de ¹¹⁹trita-mo@dlr.de ¹²⁰trita-mo@dlr.de ¹²¹trita-mo@dlr.de ¹²²trita-mo@dlr.de ¹²³

IAA-PDC15-P-64



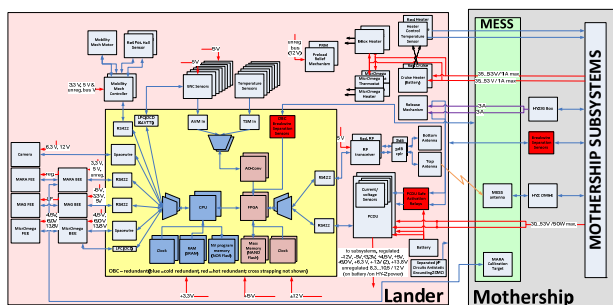
all the space you have – MASCOT LM and MESS structures
CFRP sandwich structures



all aboard – instruments, electronics & much more
CAM and MARA look at the same surface area. MicroOmega looks down



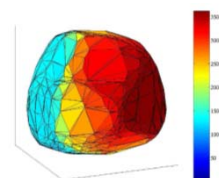
we deliver – the MASCOT Flight Model
in handling frame for integration – 10 cm scale on plate



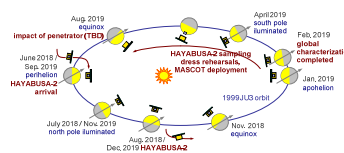
a spacecraft in a shoebox – MASCOT LM and MESS functional block diagram with interfaces to the mothership



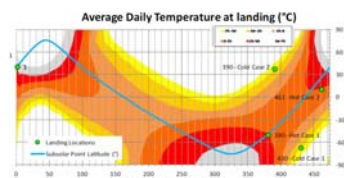
Autonomy Manager
implemented in the on-board software



(162173) 1999 JU₃
shape model with surface temperature



MASCOT timeline at 1999 JU₃
asteroid year from HAYABUSA2 arrival to departure



the seasons of 1999 JU₃
thermal conditions at the surface and for landing site selection

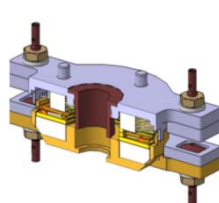


the MASCOT Mobility Unit
motor controller PCB module – motor and excenter assembly – motor and gearbox assembly

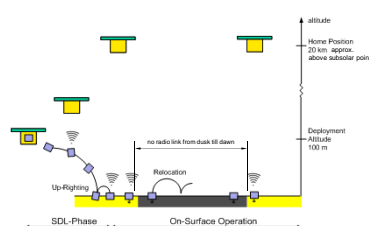


attitude control sensors
optical proximity sensor – photoelectric cell

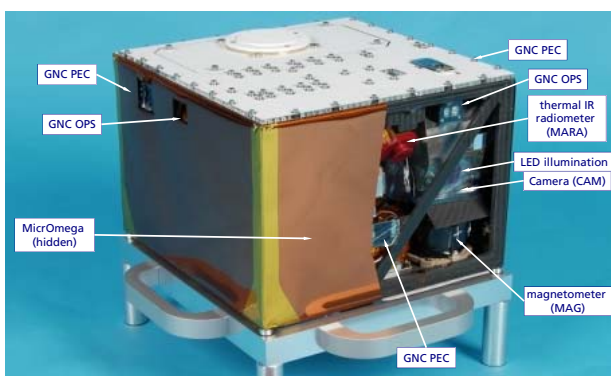
separation mechanism
push-off plate actuator – mechanism elements



preload relief mechanism
adapts structural loads for slow release



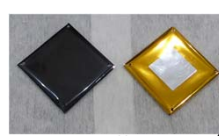
MASCOT communication with HAYABUSA2
operations on 2 asteroid days with daytime relay link to Earth



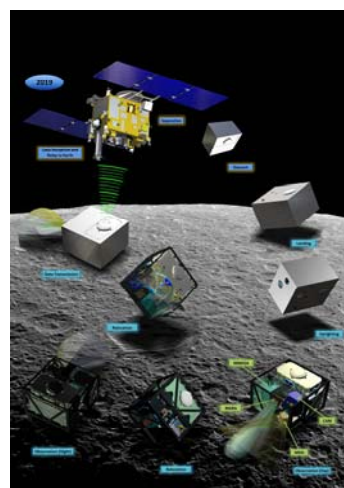
a small lander's windows to a small world
MASCOT's camera and infrared radiometer peek out of the framework structure above the magnetometer



facing an asteroid
MicroOmega and OTS experiment



attachment holes



MASCOT on the rock